

FILE 'MEDLINE' ENTERED AT 10:12:11 ON 26 OCT 2004

FILE 'CAPLUS' ENTERED AT 10:12:11 ON 26 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 10:12:11 ON 26 OCT 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'BIOSIS' ENTERED AT 10:12:11 ON 26 OCT 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'BIOTECHDS' ENTERED AT 10:12:11 ON 26 OCT 2004
COPYRIGHT (C) 2004 THE THOMSON CORPORATION

FILE 'SCISEARCH' ENTERED AT 10:12:11 ON 26 OCT 2004
Copyright (c) 2004 The Thomson Corporation.

=> s sertoli and immun? and priveleg?
5 FILES SEARCHED...

L1 0 SERTOLI AND IMMUN? AND PRIVELEG?

=> s sertoli and priveleg?
L2 0 SERTOLI AND PRIVELEG?

=> s sertoli and privileg?
L3 130 SERTOLI AND PRIVILEG?

=> dup rem 13
PROCESSING COMPLETED FOR L3
L4 69 DUP REM L3 (61 DUPLICATES REMOVED)

=> s l4 and (transfec? or transduc? or infec? or modif?)
L5 14 L4 AND (TRANSFEC? OR TRANSDUC? OR INFEC? OR MODIF?)

=> d ti 1-14

FILE 'HOME' ENTERED AT 10:50:13 ON 26 OCT 2004

=> file medline caplus embase biosis biotechds scisearch
COST IN U.S. DOLLARS SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 10:50:30 ON 26 OCT 2004

FILE 'CAPLUS' ENTERED AT 10:50:30 ON 26 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 10:50:30 ON 26 OCT 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'BIOSIS' ENTERED AT 10:50:30 ON 26 OCT 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'BIOTECHD1' ENTERED AT 10:50:30 ON 26 OCT 2004
COPYRIGHT (C) 2004 THE THOMSON CORPORATION

FILE 'SCISEARCH' ENTERED AT 10:50:30 ON 26 OCT 2004
Copyright (c) 2004 The Thomson Corporation.

=> s sertoli and (transfec? or transduc? or infec? or modif?)
L1 3129 SERTOLI AND (TRANSFEC? OR TRANSDUC? OR INFEC? OR MODIF?)

=> s sertoli (5a) (transfec? or transduc? or infec? or modif?)
L2 552 SERTOLI (5A) (TRANSFEC? OR TRANSDUC? OR INFEC? OR MODIF?)

=> s l2 and (implant? or transplant? or infus? or insert?)
L3 23 L2 AND (IMPLANT? OR TRANSPLANT? OR INFUS? OR INSERT?)

```
=> dup rem l3  
PROCESSING COMPLETED FOR L3  
L4          12 DUP REM L3 (11 DUPLICATES REMOVED)
```

=> d ti 1-12

L4 - ANSWER 1 OF 12 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
TI Providing biologically active moiety such as insulin for treating diabetes, involves administering to mammals immune privileged-cells that are genetically modified to express biologically active moiety; virus vector and liposome-mediated gene transfer and expression in human cell or tissue for disease gene therapy

L4 ANSWER 2 OF 12 MEDLINE on STN DUPLICATE 1
TI Causes of limited survival of microencapsulated pancreatic islet grafts.

L4 ANSWER 3 OF 12 MEDLINE on STN DUPLICATE 2
TI Functional analysis of the cooled rat testis.

L4 ANSWER 4 OF 12 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Restoration of spermatogenesis by lentiviral gene transfer: Offspring from
infertile mice

L4 ANSWER 5 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI The effect of FasL expression on pancreatic islet allografts.

L4 ANSWER 6 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
TI Cell based delivery of NT-3 in injured rat spinal cord.

L4 ANSWER 7 OF 12 MEDLINE on STN
TI Production of male cloned mice from fresh, cultured, and cryopreserved immature Sertoli cells.

L4 ANSWER 8 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 3
TI Insertional mutation that causes acrosomal hypo-development: Its relationship to sperm head shaping.

L4 ANSWER 9 OF 12 MEDLINE on STN
TI A tumorigenic murine Sertoli cell line that is temperature-sensitive for differentiation.

L4 ANSWER 10 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 4
TI Cyclic modulation of sertoli cell junctional complexes in a seasonal breeder: The mink (*Mustela vison*).

L4 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
TI Modifications in Sertoli cells of Wistar rats treated with estradiol and trenbolone acetate

L4 ANSWER 12 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6
TI Further observations on tubulobulbar complexes formed by late spermatids and Sertoli cells in the rat testis.

=> d bib ab 4-6

L4 ANSWER 4 OF 12 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on
STN
AN 2002:484154 SCISEARCH
GA The Genuine Article (R) Number: 557KW
TI Restoration of spermatogenesis by lentiviral gene transfer: Offspring from infertile mice
AU Ikawa M; Tergaonkar V; Ogura A; Ogonuki N; Inoue K; Verma I M (Reprint)
CS Salk Inst Biol Studies, Lab Genet, 10010 N Torrey Pines Rd, La Jolla, CA 92037 USA (Reprint); Salk Inst Biol Studies, Lab Genet, La Jolla, CA 92037 USA; RIKEN, Inst Phys & Chem Res, Bio Resource Ctr, Tsukuba, Ibaraki 3050074, Japan
CYA USA; Japan
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (28 MAY 2002) Vol. 99, No. 11, pp. 7524-7529.
Publisher: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418 USA.
ISSN: 0027-8424.
DT Article; Journal
LA English
REC Reference Count: 37
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Disruption of spermatogenesis found in azoospermia and oligozoospermia is thought to be of primarily genetic origin. SI/SId mutant mice offer a model system in which lack of transmembrane type c-kit ligand (KL2) expression on the somatic Sertoli cell surface results in disruption of spermatogenesis. We investigated the ability of adeno-, adeno-associated-, retro-, and lentiviral vectors to **transduce Sertoli** cells and found that **transduction** with either adeno- or lentiviral vectors led to reporter gene expression for more than 2 mo after testicular tubule injection. Because adenoviral vectors showed

toxicity, lentiviral vectors were used to express the c-kit ligand in SI/SId Sertoli cells. Restoration of spermatogenesis was observed in all recipient testes. Furthermore, the sperm collected from recipient testes were able to generate normal pups after intracytoplasmic sperm injection. None of the offspring carried the transgene, suggesting the inability of lentiviral vectors to infect spermatogenic cells *in vivo*. We propose that lentiviral vectors can be used for gene therapy of male infertility without the risk of germ-line transmission.

L4 ANSWER 5 OF 12 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
AN 2002274458 EMBASE
TI The effect of FasL expression on pancreatic islet allografts.
AU Zhan W.; Cai S.; Wang J.; He Y.; Zheng Z.; Peng J.
CS Dr. W. Zhan, Dept. Gastrointest./Pancreatic Surg., First Affiliated Hospital, Sun Yat-Sen Univ. Medical Sciences, Guangzhou 510080, China
SO Chinese Medical Journal, (2002) 115/7 (1006-1009).
Refs: 9
ISSN: 0366-6999 CODEN: CMDJAE
CY China
DT Journal; Article
FS 003 Endocrinology
026 Immunology, Serology and Transplantation
048 Gastroenterology
LA English
SL English
AB Objective. To investigate the immune privilege induced by the Fas ligand (FasL) expressed by cotransplanted testicular Sertoli cells in islet allografts, and the effect of FasL gene transfection on islet cells in pancreatic islet allografts. Methods. Allogeneic islets and testicular cells were cotransplanted into diabetic recipients. Pancreatic islets were infected with the recombinant adenovirus, AdV-FasL, and transplanted into diabetic recipients. Allograft survival, islet function, apoptosis of infiltrative lymphocytes in allografts and gene transfected islet allografts were analyzed. Results. All animals receiving islet allograft alone returned to a diabetic state in a few days (mean survival time 6.3 ± 0.6 days). When the quantity of testicular cells cotransplanted with islets increased to 1×10^7 , all animals remained normoglycemic throughout the follow-up period (60 days). FasL expression by cotransplanted Sertoli cells induced apoptosis of activated lymphocytes. Rejection of allografts in the FasL gene transfer group was accelerated and allograft survival was shortened to 3.4 ± 0.2 days ($P < 0.05$). Pancreatic islets infected with AdV-FasL demonstrated positive staining for FasL at 24 h after transplantation, with increased intensity at 48 h. Apoptosis assays of pancreatic islet allografts at 24 h and 48 h revealed apoptosis of transfected islets. Conclusions. FasL-expressing testicular Sertoli cells can induce apoptosis of activated lymphocytes. Cotransplantation of testicular cells allows long-term survival of allogeneic islets because of immune privilege, but the direct expression of FasL on islet allografts infected with AdV-FasL accelerates islet rejection via islet apoptosis and granulocyte infiltration.

L4 ANSWER 6 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
AN 2001:574351 BIOSIS
DN PREV200100574351
TI Cell based delivery of NT-3 in injured rat spinal cord.
AU Trivedi, A. [Reprint author]; Igarashi, T.; Hall, D. E. [Reprint author]; Love, J. [Reprint author]; John, C. M. [Reprint author]; Noble, L.
CS Dir Molec Biol, Mandal Med, Inc., San Francisco, CA, USA
SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2038.
print.
Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San

Diego, California, USA. November 10-15, 2001.

ISSN: 0190-5295.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 12 Dec 2001

Last Updated on STN: 25 Feb 2002

AB The main goal of this study was to optimize cellular delivery of neurotrophic factors for spinal cord injury. There is increasing evidence that partial functional recovery and corticospinal axonal growth is achieved in models of spinal cord injury by delivery of NT-3 at the site of injury. Immune-privileged Sertoli cells were used in this study and are being evaluated as a propriety means for delivery of protein therapeutics. The major advantage of these cells is that they are readily available from young animals and have been previously demonstrated to withstand **transplant** into allogeneic hosts. We constructed and obtained replication deficient adenovirus expressing human NT-3 and eGFP. Sertoli cells were isolated from the rat testes and infected with the virus expressing eGFP/eGFP and NT-3. Modified cells were than **implanted** in adult males by performing laminectomies and using a Harvard apparatus to inject 2X10E5 cells in single cell suspensions. Fluorescing cells were observed 3 or 15 days post **implantation** in the rat spinal cord. NT-3 expression in the spinal cord from the **implanted** Sertoli cells was detected by immunocytochemistry. There was no macrophage activation in response to **implanted** cells. We have preliminary results that indicate that the modified cells survive in the injured spinal cord. The conclusion of this study is that we are able to deliver NT-3 in the rat spinal cord by **implanting** **modified** allogeneic **Sertoli** cells.

=> s sertoli and xeno?

L5 448 SERTOLI AND XENO?

=> s 15 and (transplant? or implant? or insert? or infus?)

L6 149 L5 AND (TRANSPLANT? OR IMPLANT? OR INSERT? OR INFUS?)

=> dup rem 16

PROCESSING COMPLETED FOR L6

L7 78 DUP REM L6 (71 DUPLICATES REMOVED)

=> d ti 1-30

L7 ANSWER 1 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN

TI Construction of transgenic immune privileged cells for delivery of biologically active proteins and peptides and therapeutic use thereof

L7 ANSWER 2 OF 78 MEDLINE on STN

TI A game of cat and mouse: **xenografting** of testis tissue from domestic kittens results in complete cat spermatogenesis in a mouse host.

L7 ANSWER 3 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 1

TI Use of **Sertoli** cell **transplants** to provide local immunoprotection for tissue grafts.

L7 ANSWER 4 OF 78 MEDLINE on STN DUPLICATE 2

TI Genetically engineered **Sertoli** cells are able to survive allogeneic **transplantation**.

L7 ANSWER 5 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN

TI Cellular therapies for liver replacement.

L7 ANSWER 6 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 3
TI **Xenotransplantation** Literature Update October-December, 2003.

L7 ANSWER 7 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI Causes of limited survival of microencapsulated pancreatic islet grafts.

L7 ANSWER 8 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI Gal_{α1,3}Gal expression on porcine pancreatic islets, testis, spleen,
and thymus.

L7 ANSWER 9 OF 78 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
TI Transgenic Sertoli cells as a vehicle for gene therapy;
transgenic Sertoli cell evaluation for gene therapy; a
review

L7 ANSWER 10 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
TI Growing **xenotransplant** material in co-culture with support or
trophic cells and homologous serum

L7 ANSWER 11 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
TI Methods for the generation, maintenance and administration of new
insulin-producing cells from progenitor cells present in adult pancreatic
islets

L7 ANSWER 12 OF 78 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
TI Isolated proliferation factor obtained from the UCHT1 rat thyroid cell
line, useful for cell or gene therapy, biological production of
molecules, or as in vitro models for research, toxicity testing and drug
development;
proliferation factor isolation from stem cell, blast cell, cloned
cell, precursor cell or differentiated cell for
transplantation

L7 ANSWER 13 OF 78 MEDLINE on STN DUPLICATE 5
TI Immunoprotection of rat islet **xenografts** by cotransplantation
with **sertoli** cells and a single injection of antilymphocyte
serum.

L7 ANSWER 14 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
TI Guidelines for **xenotransplantation** [7].

L7 ANSWER 15 OF 78 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
TI Long-term survival of intratesticular porcine islets in
nonimmunosuppressed beagles.

L7 ANSWER 16 OF 78 MEDLINE on STN DUPLICATE 6
TI Long-term survival of neonatal porcine **Sertoli** cells in
non-immunosuppressed rats.

L7 ANSWER 17 OF 78 MEDLINE on STN
TI Novel mechanisms and approaches in the study of neurodegeneration and
neuroprotection. a review.

L7 ANSWER 18 OF 78 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN
TI Bioartificial organ grafts: A view at the beginning of the third
millennium

L7 ANSWER 19 OF 78 MEDLINE on STN DUPLICATE 7

TI The testicular-derived **Sertoli** cell: cellular immunoscience to enable **xenotransplantation**.

L7 ANSWER 20 OF 78 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN

TI Germ cell **transplantation**: a review and progress report on ICSI from spermatozoa generated in **xenogeneic** testes

L7 ANSWER 21 OF 78 MEDLINE on STN DUPLICATE 8
TI Harnessing the immunomodulatory properties of **Sertoli** cells to enable **xenotransplantation** in type I diabetes.

L7 ANSWER 22 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 9

TI Allogeneic offspring produced by male germ line stem cell **transplantation** into infertile mouse testis.

L7 ANSWER 23 OF 78 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation.
on STN

TI **Sertoli** cell-induced adult rat islet beta-cell mitogenesis:
Causative pathways

L7 ANSWER 24 OF 78 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI **Xenografting** rat **Sertoli** cells into the mouse striatum.

L7 ANSWER 25 OF 78 MEDLINE on STN
TI Skepticism surrounds diabetes **xenograft** experiment.

L7 ANSWER 26 OF 78 MEDLINE on STN
TI Diabetes trial stirs debate on safety of **xenotransplants**.

L7 ANSWER 27 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
TI Preparation and **xenotransplantation** or porcine islets

L7 ANSWER 28 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
TI A biocompatible biomaterial comprising a phospholipid-based artificial membrane

L7 ANSWER 29 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
TI Production of a biological factor and creation of an immunologically privileged environment using genetically altered **Sertoli** cells

L7 ANSWER 30 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
TI Methods of treating disease using **Sertoli** cells and allografts or **xenografts**

=> d bib ab 14 19 21 24 25 29 30

L7 ANSWER 14 OF 78 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN

AN 2003381470 EMBASE

TI Guidelines for **xenotransplantation** [7].

AU Sykes M.; Sandrin M.; D'Apice A.

CS Dr. M. Sykes, Massachusetts General Hospital, Boston, MA 02129, United States. megan.sykes@tbrc.mgh.harvard.edu

SO New England Journal of Medicine, (25 Sep 2003) 349/13 (1294-1295).
Refs: 5
ISSN: 0028-4793 CODEN: NEJMAG

CY United States

DT Journal; Letter

FS 009 Surgery

017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation

LA English

L7 ANSWER 19 OF 78 MEDLINE on STN DUPLICATE 7
AN 2003376235 MEDLINE
DN PubMed ID: 12911122
TI The testicular-derived **Sertoli** cell: cellular immunoscience to enable **transplantation**.
AU Emerich Dwaine F; Hemendinger Richelle; Halberstadt Craig R
CS Sertoli Technologies, Inc, Cranston RI 02921, USA.. ED3FJM@aol.com
SO Cell transplantation, (2003) 12 (4) 335-49. Ref: 134
Journal code: 9208854. ISSN: 0963-6897.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English
FS Priority Journals

EM 200403

ED Entered STN: 20030813
Last Updated on STN: 20040325
Entered Medline: 20040324

AB There is a renewed enthusiasm for the potential of cellular **transplantation** as a therapy for numerous clinical disorders. The revived interest is largely due to the unprecedented success of the "Edmonton protocol," which produced a 100% cure rate for type I diabetics following the **transplantation** of human islet allografts together with a modified immunosuppressive regimen. While these data provide a clear and unequivocal demonstration that **transplantation** is a viable treatment strategy, the shortage of suitable donor tissue together with the debilitating consequences of lifelong immunosuppression necessitate a concerted effort to develop novel means to enable **transplantation** on a widespread basis. This review outlines the use of **Sertoli** cells to provide local immunoprotection to cografted discordant cells, including those from **xenogeneic** sources. **Sertoli** cells are normally found in the testes where one of their functions is to provide local immunologic protection to developing germ cells. Isolated **Sertoli** cells 1) engraft and self-protect when **transplanted** into allogeneic and **xenogeneic** environments, 2) protect cografted allogeneic and **xenogeneic** cells from immune destruction, 3) protect islet grafts to reverse diabetes in animal models, 4) enable survival and function of cografted foreign dopaminergic neurons in rodent models of Parkinson's disease (PD), and 5) promote regeneration of damaged striatal dopaminergic circuitry in those same PD models. These benefits are discussed in the context of several potential underlying biological mechanisms. While the majority of work to date has focused on **Sertoli** cells to facilitate **transplantation** for diabetes and PD, the generalized ability of these unique cells to potently suppress the local immune environment opens additional clinical possibilities.

L7 ANSWER 21 OF 78 MEDLINE on STN DUPLICATE 8
AN 2003525895 MEDLINE
DN PubMed ID: 14603995
TI Harnessing the immunomodulatory properties of **Sertoli** cells to enable **xenotransplantation** in type I diabetes.
AU Dufour Jannette M; Rajotte Ray V; Korbutt Gregory S; Emerich Dwaine F
CS Surgical-Medical Research Institute, University of Alberta, Edmonton, Canada.. dufour@ualberta.ca
SO Immunological investigations, (2003 Nov) 32 (4) 275-97. Ref: 107
Journal code: 8504629. ISSN: 0882-0139.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 200406

ED Entered STN: 20031108
Last Updated on STN: 20040615
Entered Medline: 20040614

AB Islet **transplantation** has emerged as a viable long-term means of treating type I diabetes. This is largely due to the success of the "Edmonton protocol" which has produced insulin independence in 85% of patients 1 year after **transplantation** of allogeneic islets together with a non-steroid immunosuppressive regimen. While these data provide a clear and unequivocal demonstration that islet **transplantation** is a viable treatment strategy, the shortage of suitable donor tissue together with the debilitating consequences of life-long immunosuppression necessitate the development of novel means to enable **transplantation** of all type 1 diabetics including the young juvenile diabetics. One potential means of enabling islet **transplantation** takes advantage of the ability of **Sertoli** cells to provide local immunoprotection to co-grafted islets, including those from **xenogeneic** sources. **Sertoli** cells are normally found in the testes where one of their functions is to provide local immunologic protection to developing germ cells. In animal models, allogeneic and **xenogeneic** islets survive and function for extended periods of time when grafted into the testes. Moreover, isolated **Sertoli** cells protect co-grafted allogeneic and **xenogeneic** islets from immune destruction and reverse diabetes in immunocompetent and autoimmune animals. These benefits are discussed in the context of several potential underlying biological mechanisms.

L7 ANSWER 24 OF 78 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AN 2004:194638 BIOSIS

DN PREV200400195197

TI **Xenografting** rat **Sertoli** cells into the mouse striatum.

AU Shamekh, R. [Reprint Author]; Newcomb, J.; Mallory, J.; Cassady, .; Nipper, R.; Saporta, S.; Cameron, D. F.; Sanberg, P. R.; Willing, A. E.

CS Ctr. of Excellence for Aging and Brain Repair, Univ. of South Florida, Tampa, FL, USA

SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 150.16. <http://sfn.scholarone.com>. e-file.
Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 14 Apr 2004
Last Updated on STN: 14 Apr 2004

AB **Transplanting** cells across species presents special problems for the survival of the graft. Without masking the antigens on the surface of the **xenografted** cells, they are often rejected. We have shown that it is possible to prevent rejection of **xenografted** cells if they are **co-transplanted** with **Sertoli** cells (SCs); when cells derived from a human cell line were **transplanted** into the rat striatum, all grafts survived compared to 50% of the grafts without **co-transplanted** SCs (Willing et al, 1999). SCs are testis-derived cells that provide immunological support to developing germ cells, by providing a physical barrier, or secretion of immune modulatory factors. While allografted SCs can enhance survival of **xenografted** tissue, it is not clear whether these cells will maintain their immunosuppressive support of co-grafted cells if they were **transplanted** across species. In this study, we began to

characterize the immune modulatory capacity of SCs, and the feasibility of **xenografting** these cells alone or with allografted and **xenografted** neural tissue. **Transplanting** **xenografts** of rat SCs into the mouse striatum with either rat or mouse ventral mesencephalon prevented astrocytic infiltration of the graft site, but not infiltration of activated microglia. Surviving tyrosine hydroxylase positive neurons were observed in all conditions. Further investigation is underway to characterize the immune properties of SCs.

L7 ANSWER 25 OF 78 MEDLINE on STN
AN 2002495740 MEDLINE
DN PubMed ID: 12357221
TI Skepticism surrounds diabetes **xenograft** experiment.
AU Birmingham Karen
SO Nature medicine, (2002 Oct) 8 (10) 1047.
Journal code: 9502015. ISSN: 1078-8956.
CY United States
DT News Announcement
LA English
FS Priority Journals
EM 200211
ED Entered STN: 20021002
Last Updated on STN: 20021213
Entered Medline: 20021122

L7 ANSWER 29 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:964902 CAPLUS
DN 138:20500
TI Production of a biological factor and creation of an immunologically privileged environment using genetically altered **Sertoli** cells
IN Kirkpatrick, Shaun A.; Gores, Paul; Halberstadt, Craig
PA USA
SO U.S. Pat. Appl. Publ., 10 pp., Division of U.S. Ser. No. 433,429.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002192200	A1	20021219	US 2002-219804	20020815
PRAI US 1999-433429	A3	19991104		

AB The present invention provides a method of providing an individual with a biol. factor or intermediate thereof which comprises introducing into the individual **Sertoli** cells genetically altered to produce the biol. factor or intermediate thereof. The genetically altered **Sertoli** cells are administered in an amount effective to produce the desired effect. Aside from producing the biol. factor or intermediate thereof, the engineered **Sertoli** cells also create an immunol. privileged site. Vectors comprising a promoter which functions in **Sertoli** cells operably linked to coding sequence for a desired biol. factor are also provided as are **Sertoli** cells comprising such vectors. A pharmaceutical composition comprising **Sertoli** cells genetically altered to produce a biol. factor is also provided.

L7 ANSWER 30 OF 78 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:409243 CAPLUS
DN 136:395972
TI Methods of treating disease using **Sertoli** cells and allografts or **xenografts**
IN Selawry, Helena P.; Cameron, Don Frank
PA USA
SO U.S. Pat. Appl. Publ., 26 pp.
CODEN: USXXCO
DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002065212	A1	20020530	US 1996-747122	19961108
PRAI US 1996-747122		19961108		

AB The invention describes a method for the treatment of a disease that results from a deficiency of a biol. factor which comprises administration of **Sertoli** cells and cells that produce the biol. factor to a mammal. In particular, the invention describes a method for the treatment of diabetes mellitus by **transplanting** pancreatic islet of Langerhans cells in conjunction with **Sertoli** cells to create an immunol. privileged site. A method for creating an immunol. privileged site and providing cell stimulatory factors in a mammal for **transplants** is further described by the invention. The invention further describes a method for creating systemic tolerance to foreign antigens. A method for enhancing the viability, maturation, proliferation of functional capacity of cells in tissue culture is further provided. A pharmaceutical composition comprising **Sertoli** cells and cells that produce a biol. factor is also provided. In addition, treatment of an autoimmune disease via the **transplantation of Sertoli** cells alone into a **transplant** site other than the testes is disclosed. The dosage amount of **Sertoli** cells administered ranges from 105 to 1010 cells. Also, an in vitro method for accelerating the maturation and increasing the proliferation and functional capacity of proliferating mammalian cells via the co-culturing of the mammalian cells with **Sertoli** cells is disclosed.

=>

Connection closed by remote host

FILE 'MEDLINE' ENTERED AT 12:05:50 ON 26 OCT 2004

FILE 'CAPLUS' ENTERED AT 12:05:50 ON 26 OCT 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EMBASE' ENTERED AT 12:05:50 ON 26 OCT 2004

COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'BIOSIS' ENTERED AT 12:05:50 ON 26 OCT 2004

Copyright (c) 2004 The Thomson Corporation.

FILE 'BIOTECHDS' ENTERED AT 12:05:50 ON 26 OCT 2004

COPYRIGHT (C) 2004 THE THOMSON CORPORATION

FILE 'SCISEARCH' ENTERED AT 12:05:50 ON 26 OCT 2004

Copyright (c) 2004 The Thomson Corporation.

=> s sertoli and xeno? and (transplant? or implant? or insert? or infus?)
L1 149 SERTOLI AND XENO? AND (TRANSPLANT? OR IMPLANT? OR INSERT? OR
INFUS?)

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2 78 DUP REM L1 (71 DUPLICATES REMOVED)

=> d ti 50-78

(FILE 'HOME' ENTERED AT 13:21:23 ON 26 OCT 2004)

FILE 'MEDLINE' ENTERED AT 13:21:29 ON 26 OCT 2004

L1 164 SEA PLU=ON IMMUN? (3A) PRIVILEGE? AND (TRANSFEC? OR TRANSFORM?
 OR TRANSDUC?)
L2 3 SEA PLU=ON L1 AND SERTOLI
 D BIB AB 1-3
 D TI L1 1-30
 D TI 31-70
 D TI L1 31-70
 D TI 71-164
 D TI L1 71-164